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**FEE TRANSMITTAL**

Patent fees are subject to annual revision.



		Complete If Known						
Application Number		09/199,776						
Filing Date		25 November 1998						
First Named Inventor		SANG-HAE LEE						
Examiner Name		TRAN, HENRY N						
Group/Art Unit		2674						
TOTAL AMOUNT OF PAYMENT (\$) <b>500.00</b>		Attorney Docket No.		P55394				
METHOD OF PAYMENT (check one)			FEE CALCULATION					
<b>1. ■ Payment Enclosed:</b> <b>(CHECK #49724 )</b> <input checked="" type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input type="checkbox"/> Other			Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
			<b>MISCELLANEOUS</b>					
			1801	\$790	2801	\$395	Request for continued examination (RCE)	\$
			1806	\$180			Submission of an IDS	\$
			1814	\$130	2814	\$65	Statutory disclaimer	\$
			1501	\$1,400	2501	\$685	Utility issue fee (or reissue)	\$
			1504	\$300	1504	300	Publication fee for early, voluntary, or normal publication	\$
			8021	\$40			Recordation of assignment per property	\$
			<b>TRADEMARK</b>					
<b>2. ■ The Commissioner is hereby authorized to charge</b> any deficiency and credit any over payments to:  Deposit Account Number: <u>02-4943</u>			6001/7001		\$335		Application for registration, per class	\$
			6002/7002		\$100		Amendment to Allege Use, per class	\$
			6003/7003		\$100		Statement of Use, per class	\$
			6004/7004		\$150		Request for six-month extension of time, per class	\$
			6205/7205		\$100		\$8 affidavit, per class	\$
			6208/7208		\$200		\$15 affidavit, per class	\$
			6201/7201		\$400		Application for renewal, per class	\$
			6403/7403		\$100		Ex parte appeal, per class	\$
			<b>PETITION</b>					
1251 120 2251 60 Extension for reply within first month \$ 1252 450 2252 225 Extension for reply within second month \$ 1253 1020 2253 510 Extension for reply within third month \$ 1254 1590 2254 795 Extension for reply within fourth month \$ 1255 2160 2255 1080 Extension for reply within fifth month \$			1462		\$400		Petitions to Director (Group I)	\$
			1463		\$200		Petitions to Director (Group I)	\$
			1464		\$130		Petitions to Director (Group II)	\$
<b>APPEAL</b> 1401 500 2401 250 Notice of Appeal \$ 1402 500 2402 250 Filing a brief in support of an appeal \$ 500.00 1403 1000 2403 500 Request for oral hearing \$			1452	\$500	2452	\$250	Petitions to revive unavoidably abandoned application	\$
			1453	\$1500	2453	\$750	Petitions to revive unintentionally abandoned application	\$
			<b>PATENT MAINTENANCE</b>					
1201 200 2201 100 Independent claims in excess of 3 \$ 1202 50 2202 25 claims in excess of 20 \$			1551	\$900	2551	\$450	Due at 3.5 years	\$
			1552	\$2300	2552	\$1150	Due at 7.5 years	\$
			1553	\$3800	2553	\$1900	Due at 11.5 years	\$
Other Fee (specify) \$			Other Fee (specify) \$					
Other Fee (specify) \$			Other Fee (specify) \$					
Other Fee (specify) \$			Other Fee (specify) \$					
<b>SUBTOTAL: LEFT COLUMN</b>		<b>\$500.00</b>	<b>SUBTOTAL: RIGHT COLUMN</b>				<b>\$0.00</b>	
SUBMITTED BY					Complete (if applicable)			
Typed or Printed Name		Robert E. Bushnell, Esq.			Reg. Number	27,774		
Signature				Date	17 October 2005	Deposit Account User ID		



PATENT  
P55394

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Application of:

**Appeal No.** \_\_\_\_\_

SANG-HAE LEE

Serial No.: 09/199,776

Examiner: TRAN, HENRY N.

Filed: 25 November 1998

Art Unit: 2674

For: HOT-PLUGGING METHOD OF DISPLAY APPARATUS

**Attn: Board of Patent Appeals & Interferences**

**TRANSMITTAL OF APPELLANT'S BRIEF FEE**

**Mail Stop Appeal Brief-Patents**

Commissioner for Patents

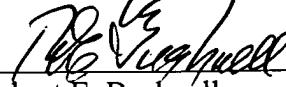
P.O.Box 1450

Alexandria, VA 22313-1450

Sir:

Accompanying this transmittal is a check drawn to the Commissioner of Patents & Trademarks in the amount of \$500.00 (Check #49724) for the filing an **Appeal Brief** in support of a Notice of Appeal filed on 15 August 2005. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,

  
\_\_\_\_\_  
Robert E. Bushnell  
Attorney for Applicant  
Reg. No.: 27,774

1522 "K" Street, N.W., Suite 300  
Washington, D.C. 20005  
Area Code: 202-408-9040

Folio: P55394  
Date: 10/17/05  
I.D.: REB/ms



PATENT  
P55394

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Application of:

**Appeal No.** \_\_\_\_\_

SANG-HAE LEE

Serial No.: 09/199,776

Examiner: TRAN, HENRY N.

Filed: 25 November 1998

Art Unit: 2674

For: HOT-PLUGGING METHOD OF DISPLAY APPARATUS

**APPEAL BRIEF**

**Paper No. 24**

**Mail Stop Appeal Brief-Patents**

Commissioner for Patents

P.O.Box 1450

Alexandria, VA 22313-1450

Sir:

Pursuant to Appellant's Notice of Appeal filed on 15 August 2005, Appellant hereby appeals to the Board of Patent Appeals and Interferences from the final rejection of claims 2, 6 thru 9 and 21 thru 70 as set forth in the final Office action mailed on 13 May 2005 (Paper No. 0) and the Advisory Action mailed on 9 August 2005 (an unnumbered paper). Claims 1, 3 thru 5 and 10 thru 20 have been previously canceled.

Folio: P55394

Date: 10/17/05

I.D.: REB/JGS/kf

10/18/2005 JADDO1 00000032 09199776  
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**I. REAL PARTY IN INTEREST**

Pursuant to 37 CFR §41.37 (as amended), the real party in interest is:

SamSung Electronics Co., Ltd.  
#416, Maetan-dong, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 442-742, Republic of KOREA

as evidenced by the Assignment executed by the inventor on 1 October 1998 and recorded in the U.S. Patent & Trademark Office on 25 November 1998 at Reel 9615, frame 0950.

**II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals and no interferences known to Appellant, Appellant's legal representatives or the assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 2, 6 thru 9 and 21 thru 70 stand finally rejected. Of the latter claims, claims 2, 6 thru 9, 21, 26, 31, 36 and 43 are independent, whereas the remaining claims are dependent. Claims 1, 3 thru 5 and 10 thru 20 have been previously canceled.

**IV. STATUS OF AMENDMENTS**

No claim amendments are made subsequent to the final rejection.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to a method of recognizing whether a display apparatus is newly connected to a main body of a computer and, more particularly, to a hot-plugging method for a display apparatus which is capable of determining whether a display apparatus is replaced with another by polling or interrupting.

Referring to Figure 3, the hot-plugging method for a display apparatus comprises the steps of: reading information pertaining to a display apparatus by a predetermined data communication upon recognizing that a display apparatus has been newly connected while a controller provided in a main body of a computer maintains determination of a new connection of display apparatus (S310); determining whether the read information is identical to or different from the previously stored information stored in a memory pertaining to the current display apparatus (S330); and storing the newly read information when the newly read information is not identical to the previously stored information, determining an optimal resolution corresponding to the newly connected display apparatus and transmitting the optimal resolution to a video card (S340). By performing the latter steps, when replacing the display apparatus to be connected to the main body of the computer, the main body of the computer automatically recognizes the newly connected display apparatus and provides an initializing method, so that the newly connected display apparatus can be normally operated without re-operating the main body of the computer. Thus, the computer does not need to be rebooted in order to attach a new monitor.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether claims 8, 9, 21, 22, 25 thru 27, 30 thru 32, 35 thru 38, 40, 41, 43 thru 47, 50 and 63 thru 70 are improperly rejected under 35 U.S.C. §103 for alleged unpatentability over Lien *et al.*, U.S. Patent No. 5,386,567 in view of Hendry *et al.*, U.S. Patent No. 5,682,529 and Nolan *et al.*, U.S. Patent No. 6,049,316.

2. Whether claims 2, 6, 7, 23, 24, 28, 29, 33, 34, 39, 42, 48, 49 and 51 thru 62 are improperly rejected under 35 U.S.C. §103 for alleged unpatentability over Lien *et al.* '567 in view of Hendry *et al.* '529 and Nolan *et al.* '316, and further in view of Siefert, U.S. Patent No. 6,662,240.

## **VII. GROUPING OF CLAIMS**

Independent claim 2;

Claims 51 and 52;

Claim 53;

Claim 54;

Independent claim 6;

Claims 55 and 56;

Claim 57;

Claim 58;

Independent claim 7;

Claims 59 and 60;

Claim 61;

Claim 62;

Independent claim 8;

Claims 63 and 64;

Claim 65;

Claim 66;

Independent claim 9;

Claims 67 and 68;

Claim 69;

Claim 70;

Independent claim 21;

Claim 22;

Claim 23;

Claim 24;

Claim 25;

Independent claim 26;

Claim 27;

Claim 28;

Claim 29;

Claim 30;

Independent claim 31;

Claim 32;

Claim 33;

Claim 34;

Claim 35;

Independent claim 36 and dependent claims 37, 40 and 41;

Claim 38;

Claim 39;

Claim 42.

Independent claim 43 and dependent claims 44 thru 66;

Claim 47;

Claim 48;

Claim 49; and

Claim 50.

## VIII. ARGUMENT

### Justification of Grouping of claims

Independent claim 2 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, detecting, operating, determining, and storing/determining/transmitting steps, with the detecting step comprising the operating step recited in the claim.

Dependent claims 51 and 52 are separately grouped from independent claim 2 by virtue of

the recitation of the detecting step as comprising detecting whether a hot-plugging of said video display unit occurs.

Dependent claim 53 is separately grouped from independent claim 2 by virtue of the recitation of the detecting being performed after a booting process is completed.

Dependent claim 54 is separately grouped from independent claim 2 by virtue of the recitation of the polling operation being performed after a booting process of said processing unit is completed.

Independent claim 6 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, detecting, operating, determining, and storing/determining/transmitting steps, with the detecting step being performed while power is being newly supplied to the processing unit.

Dependent claims 55 and 56 is separately grouped from independent claim 6 by virtue of the recitation of the detecting step as comprising detecting whether a hot-plugging of said video display unit occurs.

Dependent claim 57 is separately grouped from independent claim 6 by virtue of the recitation of the detecting being performed after a booting process of said processing unit is

completed.

Dependent claim 58 is separately grouped from independent claim 6 by virtue of the recitation of the polling operation being performed after a booting process of said processing unit is completed.

Independent claim 7 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, detecting, operating, determining, and storing/determining/transmitting steps, with the detecting step being performed after power has been newly supplied to the processing unit.

Dependent claims 59 and 60 are separately grouped from independent claim 7 by virtue of the recitation of the detecting step as comprising detecting whether a hot-plugging of said video display unit occurs.

Dependent claim 61 is separately grouped from independent claim 7 by virtue of the recitation of the detecting being performed after a booting process of said processing unit is completed.

Dependent claim 62 is separately grouped from independent claim 7 by virtue of the recitation of the polling operation being performed after a booting process of said processing unit

is completed.

Independent claim 8 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, detecting, operating, determining, and storing/determining/transmitting steps, with the detecting step being performed while power is being newly supplied to the processing unit.

Dependent claims 63 and 64 are separately grouped from independent claim 8 by virtue of the recitation of the detecting step as comprising detecting whether a hot-plugging of said video display unit occurs.

Dependent claim 65 is separately grouped from independent claim 8 by virtue of the recitation of the detecting being performed after a booting process of said processing unit is completed.

Dependent claim 66 is separately grouped from independent claim 8 by virtue of the recitation of the polling operation being performed after a booting process of said processing unit is completed.

Independent claim 9 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, detecting, operating, determining, and storing/determining/

transmitting steps, with the detecting step being performed after power has been newly supplied to the processing unit.

Dependent claims 67 and 68 are separately grouped from independent claim 9 by virtue of the recitation of the detecting step as comprising detecting whether a hot-plugging of said video display unit occurs.

Dependent claim 69 is separately grouped from independent claim 9 by virtue of the recitation of the detecting being performed after a booting process of said processing unit is completed.

Dependent claim 70 is separately grouped from independent claim 9 by virtue of the recitation of the polling operation being performed after a booting process of said processing unit is completed.

Independent claim 21 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, connecting, detecting, operating, determining, and storing/identifying/transmitting steps recited in the claim.

Dependent claim 22 is separately grouped from independent claim 21 by virtue of the recitation of the connecting, detecting, operating, determining, storing, identifying, and transmitting

steps being performed without rebooting said computer.

Dependent claim 23 is separately grouped from claims 21 and 22 by virtue of the recitation of the detecting step as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer.

Dependent claim 24 is separately grouped from independent claim 21 by virtue of the recitation of the detecting step as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer.

Dependent claim 25 is separately grouped from independent claim 21 by virtue of the recitation of the detecting step as comprising sensing of an interrupt signal generated by said DDC interface when said video display unit is connected to said computer.

Independent claim 26 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, connecting, detecting, operating, and transmitting steps recited in the claim.

Dependent claim 27 is separately grouped from independent claim 26 by virtue of the

recitation of the connecting, detecting, operating, and transmitting steps being performed without rebooting the computer.

Dependent claim 28 is separately grouped from claim 27 by virtue of the recitation of the detecting step as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer.

Dependent claim 29 is separately grouped from independent claim 26 by virtue of the recitation of the detecting step as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer.

Dependent claim 30 is separately grouped from independent claim 26 by virtue of the recitation of the detecting step as comprising sensing of an interrupt signal generated by said DDC interface when said video display unit is connected to said computer.

Independent claim 31 is separately grouped by virtue of the recitation of a method comprising the combination of the providing, powering, connecting, detecting, operating, and transmitting steps recited in the claim.

Dependent claim 32 is separately grouped from independent claim 31 by virtue of the recitation of the connecting, detecting, operating, and transmitting steps being performed without restarting said computer.

Dependent claim 33 is separately grouped from claim 32 by virtue of the recitation of the detecting step as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface to sense when said video display unit is connected to said computer.

Dependent claim 34 is separately grouped from independent claim 31 by virtue of the recitation of the detecting step as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface to sense when said video display unit is connected to said computer.

Dependent claim 35 is separately grouped from independent claim 31 by virtue of the recitation of the detecting step as comprising sensing of an interrupt signal generated by said DDC interface when said video display unit is connected to said computer.

Independent claim 36 and dependent claims 37, 40 and 41 are separately grouped by virtue of the recitation of an apparatus comprising the combination of a computer system and a video display unit, the computer system comprising a processing unit, a digital data communication (DDC)

interface and a video card, with the various functions recited in the claim.

Dependent claim 38 is separately grouped from independent claim 36 by virtue of the recitation of the apparatus as comprising first and second memories with the functions of the memories and the processing unit as recited in the claim.

Dependent claim 39 is separately grouped from claim 38 by virtue of the recitation of the detecting performed by said processing unit as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer system.

Dependent claim 42 is separately grouped from independent claim 36 by virtue of the recitation of the detecting performed by said processing unit as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer system.

Independent claim 43 and dependent claims 44 thru 46 are separately grouped by virtue of the recitation of an apparatus comprising the combination of a computer system and a video display unit, the computer system comprising a processing unit, a digital data communication (DDC) interface and a video card, with the various functions recited in the claim.

Dependent claim 47 is separately grouped from independent claim 43 by virtue of the recitation of the processing unit performing said detecting, operating, and transmitting without restarting said computer system.

Dependent claim 48 is separately grouped from claim 47 by virtue of the recitation of the detecting performed by said processing unit as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer system.

Dependent claim 49 is separately grouped from independent claim 43 by virtue of the recitation of the detecting performed by said processing unit as comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer system.

Dependent claim 50 is separately grouped from independent claim 43 by virtue of the recitation of the detecting performed by said processing unit as including a sensing of an interrupt signal generated by said DDC interface when said video display unit is connected to said computer system.

**Patentability Over the Prior Art**

For the reasons stated below, it is respectfully submitted that the inventive method and apparatus recited in the claims are distinguishable over the prior art so as to preclude rejection under 35 U.S.C. §102 or §103.

*Lien et al.* '567 discloses a hot removable and insertion of attachments on fully initialized computer systems. *Hendry et al.* '529 discloses a system for dynamically accommodating changes in display configuration by notifying of changes to currently running application programs so as to generate information by the application programs in conformity with changes to the configuration. *Nolan et al.* '316 discloses a personal computer (PC) with multiple video-display refresh-rate configurations using active and default registers. Finally, *Siefert* '240 discloses an automated configuration of computer accessories. For the reasons stated below, none of these references, either alone or in combination, discloses or suggests the invention recited in the independent claims of the present application.

Specifically, each of the method claims of the present application recites the step of providing the computer with a processing unit, a memory unit connected to the processing unit, and a digital data communication (DDC) interface connected to the processing unit, while some of the method claims also recite the video card connected to the processing unit and coupled to the video display unit. Similarly, each of the apparatus claims of the present application recites the combination of a computer system and a video display unit, with the computer system being recited as including a

processing unit and a DDC interface, and in the case of some claims, a video card as described above.

None of the references cited by the Examiner, either alone or in combination, discloses or suggests such a combination of steps as recited in the independent method claims or such a combination of elements and functions as recited in the independent apparatus claims of the present application.

In addition, each of the independent claims of the present application recites the step or function of operating the DDC interface in the processing unit to read first data corresponding to the video display unit from the video display unit. None of the references cited by the Examiner, either alone or in combination, discloses this step or function.

In response to the latter argument, the Examiner cites Nolan *et al.* '316, and specifically the video BIOS, VESA BIOS extensions (VBE) 46 shown in Figure 5 of Nolan *et al.* '316 (*see* the first complete paragraph on page 4 of the final Office action). However, the VBE 46 of Nolan *et al.* '316 does not correspond to the digital data communications (DDC) interface recited in the independent claims of this application.

Specifically, the claimed DDC interface is recited as being connected to the processing unit. In contrast, the VBE 46 of Nolan *et al.* '316 is described as being part of a graphic based subsystem

composed of hardware, software and firmware contained within a Window-based portable PC (*see* column 6, lines 63-65 and Figure 5 of Nolan *et al.* '316). Thus, the VBE 46 does not appear to be a hardware-implemented DDC interface connected to a processing unit, as claimed. Rather, the VBE 46 appears to be a component of the processing unit itself for interfacing the display driver 42 (contained in the processing unit) to graphics hardware 50 (*see* Figure 5 and column 7, lines 16-20 of Nolan *et al.* '316).

In addition, there is nothing contained within the “four corners” of the disclosure of Lien *et al.* '567 or Hendry *et al.* '529, or in “Lien-Hendry” as referred to by the Examiner, which would motivate or instruct a person of ordinary skill in the art, upon reviewing “Lien-Hendry”, to seek and obtain the disclosure of Nolan *et al.* '316 and/or to modify the disclosure of “Lien-Hendry” in accordance with the disclosure of Nolan *et al.* '316 to obtain the invention. It is respectfully submitted that the only reason that the Examiner has been able to develop a scenario for modifying “Lien-Hendry” in accordance with Nolan *et al.* '316 is that the Examiner has had the benefit of reviewing the teachings contained in the disclosure of the present application which, of course, would not have been available to the person of ordinary skill in the art as of the date of the present invention.

Furthermore, independent claims 2, 6 and 7 recite the further step, as a part of the detection step, of operating the processing unit to carry out a polling operation periodically with respect to said DDC interface so as to determine whether the video display unit is newly coupled to said processing

unit. None of the references cited by the Examiner, either alone or in combination, discloses or suggests this step as recited in independent claims 2, 6 and 7.

Independent claim 9 recites the detecting step as comprising the sensing of an interrupt signal generated by the DDC interface when the video display unit is newly coupled to the processing unit, the detecting step being performed after power has been newly supplied to the processing unit. None of the references cited by the Examiner, either alone or in combination, discloses or suggests the detecting step as is recited in the last paragraph of claim 9.

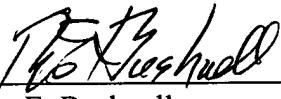
The dependent claims provide further bases for distinguishing the invention from the prior art cited by the Examiner. For example, the “polling” operation discussed above is recited in more detailed in dependent claims 23, 24, 28, 29, 33, 34, 39, 42, 48 and 49. Moreover, the “interrupt signal” operation discussed above is recited in more detail in dependent claims 25, 30, 35 and 50. Thus, the latter claims further distinguish the invention from the prior art cited by the Examiner.

Finally, Lien *et al.* ‘567 does not contain a disclosure, and the Examiner has not pointed out any disclosure, which would motivate a person of skill in the art to seek the secondary references cited by the Examiner, or which would instruct the person of skill in the art as to how to employ the secondary references to modify the disclosure of the primary reference (Lien *et al.* ‘567) so as to obtain the claimed invention. Thus, the combination of cited references is improper under 35 U.S.C. §103.

**ACTION REQUESTED**

In view of the law and facts stated herein, as well as all of the foregoing reasons, Appellant believes that the rejection is improper, and respectfully requests that the Board refuse to sustain the outstanding rejection of claims 2, 6 thru 9 and 21 thru 70 under 35 U.S.C. §103.

Respectfully submitted,

  
\_\_\_\_\_  
Robert E. Bushnell,  
Attorney for the Appellant  
Registration No.: 27,774

1522 "K" Street N.W., Suite 300  
Washington, D.C. 20005  
(202) 408-9040

Folio: P55394  
Date: 10/17/05  
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## VIII. APPENDIX

### CLAIMS UNDER APPEAL (Claims 2, 6-9 and 21-70)

Claim 1. (Canceled)

1           2. (Previously Presented) A method of hot-plugging a video display unit to a computer,  
2 comprising the steps of:

3                 providing the computer with a processing unit, a memory unit connected to said processing  
4                 unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5                 card connected to said processing unit and coupled to said video display unit;

6                 while power is being supplied to said processing unit, detecting whether said video display  
7                 unit is newly coupled to said processing unit, said video display unit conveying varying visual  
8                 information to a user, and said processing unit processing data including the varying visual  
9                 information;

10                 when said video display unit is detected as being newly coupled to said processing unit while  
11                 power is being supplied to said processing unit, operating said DDC interface and said processing  
12                 unit to read first data corresponding to said video display unit from said video display unit;

13                 determining whether said first data corresponds to second data stored in said memory unit;  
14                 and

15                 when said first data does not correspond to said second data stored in said memory unit,  
16                 storing said first data in said memory unit, determining a resolution corresponding to said video

17       display unit, and transmitting said resolution to said video card coupled to said video display unit;  
18                said detecting step comprising operating said processing unit to carry out a polling operation  
19                periodically with respect to said DDC interface so as to determine whether said video display unit  
20                is newly coupled to said processing unit.

Claims 3 through 5. (Canceled)

1               6. (Previously Presented) A method of hot-plugging a video display unit to a computer,  
2               comprising:  
3               providing the computer with a processing unit, a memory unit connected to said processing  
4               unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5               card connected to said processing unit and coupled to said video display unit;  
6               while power is being supplied to said processing unit, detecting whether said video display  
7               unit is newly coupled to said processing unit, said video display unit conveying varying visual  
8               information to a user, and said processing unit processing data including the varying visual  
9               information;  
10               when said video display unit is detected as being newly coupled to said processing unit while  
11               power is being supplied to said processing unit, operating said DDC interface and said processing  
12               unit to read first data corresponding to said video display unit from said video display unit;  
13               determining whether said first data corresponds to second data stored in said memory unit;  
14               and

15           when said first data does not correspond to said second data stored in said memory unit,  
16        storing said first data in said memory unit, determining a resolution corresponding to said video  
17        display unit, and transmitting said resolution to said video card coupled to said video display unit;  
18           said detecting step comprising operating said processing unit to carry out a polling operation  
19        periodically with respect to said DDC interface so as to determine whether said video display unit  
20        is newly coupled to said processing unit, said detecting step being performed while power is being  
21        newly supplied to said processing unit.

1           7. . . (Previously Presented) A method of hot-plugging a video display unit to a computer,  
2        comprising:

3           providing the computer with a processing unit, a memory unit connected to said processing  
4        unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5        card connected to said processing unit and coupled to said video display unit;

6           while power is being supplied to said processing unit, detecting whether said video display  
7        unit is newly coupled to said processing unit, said video display unit conveying varying visual  
8        information to a user, and said processing unit processing data including the varying visual  
9        information;

10           when said video display unit is detected as being newly coupled to said processing unit while  
11        power is being supplied to said processing unit, operating said DDC interface and said processing  
12        unit to read first data corresponding to said video display unit from said video display unit;

13           determining whether said first data corresponds to second data stored in said memory unit;

14 and

15       when said first data does not correspond to said second data stored in said memory unit,  
16       storing said first data in said memory unit, determining a resolution corresponding to said video  
17       display unit, and transmitting said resolution to said video card coupled to said video display unit;

18

19       said detecting step comprising operating said processing unit to carry out a polling operation  
20       periodically with respect to said DDC interface so as to determine whether said video display unit  
21       is newly coupled to said processing unit, said detecting step being performed after power has been  
22       newly supplied to said processing unit.

1           8. (Previously Presented) A method of hot-plugging a video display unit to a computer,  
2 comprising:

3       providing the computer with a processing unit, a memory unit connected to said processing  
4       unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5       card connected to said processing unit and coupled to said video display unit;

6       while power is being supplied to said processing unit, detecting whether said video display  
7       unit is newly coupled to said processing unit, said video display unit conveying varying visual  
8       information to a user, and said processing unit processing data including the varying visual  
9       information;

10       when said video display unit is detected as being newly coupled to said processing unit while  
11       power is being supplied to said processing unit, operating said DDC interface and said processing

12 unit to read first data corresponding to said video display unit from said video display unit;  
13 determining whether said first data corresponds to second data stored in said memory unit;  
14 when said first data does not correspond to said second data stored in said memory unit,  
15 storing said first data in said memory unit, determining a resolution corresponding to said video  
16 display unit, and transmitting said resolution to said video card coupled to said video display unit;  
17 said detecting step comprising a sensing of an interrupt signal generated by said DDC  
18 interface when said video display unit is newly coupled to said processing unit, said detecting step  
19 being performed while power is being newly supplied to said processing unit.

1 9. (Previously Presented) A method of hot-plugging a video display unit to a computer,  
2 comprising:

3 providing the computer with a processing unit, a memory unit connected to said processing  
4 unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5 card connected to said processing unit and coupled to said video display unit;

6 while power is being supplied to said processing unit, detecting whether said video display  
7 unit is newly coupled to said processing unit, said video display unit conveying varying visual  
8 information to a user, and said processing unit processing data including the varying visual  
9 information;

10 when said video display unit is detected as being newly coupled to said processing unit while  
11 power is being supplied to said processing unit, operating said DDC interface and said processing  
12 unit to read first data corresponding to said video display unit from said video display unit;

13 determining whether said first data corresponds to second data stored in said memory unit;

14 when said first data does not correspond to said second data stored in said memory unit,

15 storing said first data in said memory unit, determining a resolution corresponding to said video

16 display unit, and transmitting said resolution to said video card coupled to said video display unit;

17 and

18 said detecting step comprising a sensing of an interrupt signal generated by said DDC

19 interface when said video display unit is newly coupled to said processing unit, said detecting step

20 being performed after power has been newly supplied to said processing unit.

Claims 10 through 20. (Canceled)

1 21. (Previously Presented) A method of hot-plugging a video display unit to a computer,

2 comprising:

3 providing the computer with a processing unit, a memory unit connected to said processing  
4 unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5 card connected to said processing unit and coupled to said video display unit;

6 connecting said video display unit to said computer after said computer has been powered  
7 on and initialized, said video display unit conveying varying visual information to a user;

8 detecting whether said video display unit is connected to said computer;

9 when said video display unit is detected as being connected to said computer, operating said  
10 DDC interface and said processing unit to read first data corresponding to said video display unit;

11           determining whether said first data corresponds to second data stored in said memory unit;

12           and

13           when said first data does not correspond to said second data stored in said memory unit,

14           storing said first data in said memory unit, identifying a resolution corresponding to said video

15           display unit, and transmitting said resolution to said video card coupled to said video display unit.

1           22. (Previously Presented)   The method of claim 21, said connecting, detecting, operating,

2           determining, storing, identifying, and transmitting steps being performed without rebooting said

3           computer.

1           23. (Previously Presented)   The method of claim 22, said detecting step comprising

2           operating said processing unit to carry out a polling operation periodically with respect to said DDC

3           interface so as to sense when said video display unit is connected to said computer.

1           24. (Previously Presented)   The method of claim 21, said detecting step comprising

2           operating said processing unit to carry out a polling operation periodically with respect to said DDC

3           interface so as to sense when said video display unit is connected to said computer.

1           25. (Previously Presented)   The method of claim 21, said detecting step comprising a

2           sensing of an interrupt signal generated by said DDC interface when said video display unit is

3           connected to said computer.

1        26. (Previously Presented) A method of hot-plugging a video display unit to a computer,  
2 comprising:

3                providing the computer with a processing unit, a memory unit connected to said processing  
4        unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5        card connected to said processing unit and coupled to said video display unit;

6                connecting said video display unit to said computer after said computer has been initialized  
7        and while said computer is being operated by a user, said video display unit conveying varying visual  
8        information to the user;

9                detecting whether said video display unit is connected to said computer;

10                when said video display unit is detected as being connected to said computer, operating said  
11        DDC interface and said processing unit to read first data corresponding to said video display unit  
12        from said video display unit; and

13                transmitting resolution data to said video card coupled to said video display unit, said  
14        resolution data corresponding to said first data.

1        27. (Previously Presented) The method of claim 26, said connecting, detecting, operating,  
2        and transmitting steps being performed without rebooting said computer.

1        28. (Previously Presented) The method of claim 27, said detecting step comprising  
2        operating said processing unit to carry out a polling operation periodically with respect to said DDC

3 interface so as to sense when said video display unit is connected to said computer.

1 29. (Previously Presented) The method of claim 26, said detecting step comprising  
operating said processing unit to carry out a polling operation periodically with respect to said DDC  
3 interface so as to sense when said video display unit is connected to said computer.

1 30. (Previously Presented) The method of claim 26, said detecting step comprising a  
2 sensing of an interrupt signal generated by said DDC interface when said video display unit is  
3 connected to said computer.

1 31. (Previously Presented) A method of hot-plugging a video display unit to a computer,  
2 comprising:

3 providing the computer with a processing unit, a memory unit connected to said processing  
4 unit, a digital data communication (DDC) interface connected to said processing unit, and a video  
5 card connected to said processing unit and coupled to said video display unit;

6 powering on said computer;

7 connecting said video display unit to said computer after said powering on of said computer,  
8 said video display unit conveying varying visual information to a user;

9 detecting whether said video display unit is connected to said computer;

10 when said video display unit is detected as being connected to said computer, operating said  
11 DDC interface and said processing unit to read first data corresponding to said video display unit

12 from said video display unit; and  
13 transmitting resolution data to said video card coupled to said video display unit, said  
14 resolution data corresponding to said first data.

1 32. (Previously Presented) The method of claim 31, said connecting, detecting, operating,  
2 and transmitting steps being performed without restarting said computer.

1 33. (Previously Presented) The method of claim 32, said detecting step comprising  
2 operating said processing unit to carry out a polling operation periodically with respect to said DDC  
3 interface to sense when said video display unit is connected to said computer.

1 34. (Previously Presented) The method of claim 31, said detecting step comprising  
2 operating said processing unit to carry out a polling operation periodically with respect to said DDC  
3 interface to sense when said video display unit is connected to said computer.

1 35. (Previously Presented) The method of claim 31, said detecting step comprising a  
2 sensing of an interrupt signal generated by said DDC interface when said video display unit is  
3 connected to said computer.

1 36. (Previously Presented) An apparatus, comprising:  
2 a computer system for processing data; and

3           a video display unit for conveying varying visual information to a user, said video display  
4       unit being connected to said computer system after said computer system has been powered on and  
5       initialized;

6           said computer system including a processing unit installed in said computer system, a digital  
7       data communication (DDC) interface connected to said processing unit, and a video card connected  
8       to said processing unit and coupled to said video display unit;

9           said processing unit processing the data including the visual information, said processing unit  
10      detecting whether said video display unit is connected to said computer system, said processing unit  
11      operating said DDC interface to read first data corresponding to said video display unit when said  
12      video display unit is detected, said processing unit determining whether said first data corresponds  
13      to second data stored in said computer system, said processing unit storing said first data,  
14      determining resolution data corresponding to said video display unit, and transmitting said resolution  
15      data when said first data does not correspond to said second data.

1           37. (Previously Presented)   The apparatus of claim 36, said video card being disposed  
2       between said processing unit and said video display unit, said video card receiving said resolution  
3       data transmitted from said processing unit.

1           38. (Previously Presented)   The apparatus of claim 36, further comprising:  
2       a first memory installed in said video display unit, said processing unit reading said first data  
3       from said first memory; and

4           a second memory installed in said computer system, said second data being stored in said  
5       second memory;

6           said processing unit storing said first data in said second memory when said first data does  
7       not correspond to said second data.

1           39. (Previously Presented) The apparatus of claim 38, said detecting performed by said  
2       processing unit comprising operating said processing unit to carry out a polling operation  
3       periodically with respect to said DDC interface so as to sense when said video display unit is  
4       connected to said computer system.

1           40. (Previously Presented) The apparatus of claim 36, said resolution data corresponding to  
2       an optimal resolution of said video display unit.

1           41. (Previously Presented) The apparatus of claim 36, wherein said video display unit  
2       comprises one of a cathode ray tube, a liquid crystal display, a gas-plasma display, a light emitting  
3       diode display, an electro-luminescent display, and a field emission display.

1           42. (Previously Presented) The apparatus of claim 36, said detecting performed by said  
2       processing unit comprising operating said processing unit to carry out a polling operation  
3       periodically with respect to said DDC interface so as to sense when said video display unit is  
4       connected to said computer system.

1       43. (Previously Presented) An apparatus, comprising:  
2           a computer system for processing data; and  
3           a video display unit for conveying varying visual information to a user, said video display  
4           unit being connected to said computer system after said computer system has been booted;  
5           said computer system including a processing unit installed in said computer system, a digital  
6           data communication (DDC) interface connected to said processing unit, and a video card connected  
7           to said processing unit and coupled to said video display unit;  
8           said processing unit processing the data including the visual information, said processing unit  
9           detecting whether said video display unit is connected to said computer system, said processing unit  
10          operating said DDC interface to read first data corresponding to said video display unit and  
11          transmitting resolution data corresponding to said first data.

1       44. (Previously Presented) The apparatus of claim 43, said video card being disposed  
2          between said processing unit and said video display unit, said video card receiving said resolution  
3          data transmitted from said processing unit.

1       45. (Previously Presented) The apparatus of claim 43, further comprising a first memory  
2          installed in said video display unit, said processing unit reading said first data from said first  
3          memory.

46. (Previously Presented) The apparatus of claim 43, said resolution data corresponding optimal resolution of said video display unit.

47. (Previously Presented) The apparatus of claim 43, said processing unit performing said  
ing, operating, and transmitting without restarting said computer system.

48. (Previously Presented) The apparatus of claim 47, said detecting performed by said processing unit comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer system.

49. (Previously Presented) The apparatus of claim 43, said detecting performed by said processing unit comprising operating said processing unit to carry out a polling operation periodically with respect to said DDC interface so as to sense when said video display unit is connected to said computer system.

50. (Previously Presented) The apparatus of claim 43, said detecting performed by said processing unit including a sensing of an interrupt signal generated by said DDC interface when said display unit is connected to said computer system.

51. (Previously Presented) The method of claim 2, said detecting whether said video

2       display unit is newly coupled to said processing unit comprising detecting whether a hot-plugging  
3       of said video display unit occurs.

1           52. (Previously Presented)   The method of claim 51, said hot-plugging of said video  
2       display unit comprising connecting said video display unit to said processing unit after a booting  
3       process of said processing unit is completed.

1           53. (Previously Presented)   The method of claim 2, said detecting being performed after  
2       a booting process of said processing unit is completed.

1           54. (Previously Presented)   The method of claim 2, said polling operation being performed  
2       after a booting process of said processing unit is completed.

1           55. (Previously Presented)   The method of claim 6, said detecting whether said video  
2       display unit is newly coupled to said processing unit comprising detecting whether a hot-plugging  
3       of said video display unit occurs.

1           56. (Previously Presented)   The method of claim 55, said hot-plugging of said video  
2       display unit comprising connecting said video display unit to said processing unit after a booting  
3       process of said processing unit is completed.

1        57. (Previously Presented)    The method of claim 6, said detecting being performed after  
2        a booting process of said processing unit is completed.

1        58. (Previously Presented)    The method of claim 6, said polling operation being performed  
2        after a booting process of said processing unit is completed.

1        59. (Previously Presented)    The method of claim 7, said detecting whether said video  
2        display unit is newly coupled to said processing unit comprising detecting whether a hot-plugging  
3        of said video display unit occurs.

1        60. (Previously Presented)    The method of claim 59, said hot-plugging of said video  
2        display unit comprising connecting said video display unit to said processing unit after a booting  
3        process of said processing unit is completed.

1        61. (Previously Presented)    The method of claim 7, said detecting being performed after  
2        a booting process of said processing unit is completed.

1        62. (Previously Presented)    The method of claim 7, said polling operation being performed  
2        after a booting process of said processing unit is completed.

1        63. (Previously Presented)    The method of claim 8, said detecting whether said video

2       display unit is newly coupled to said processing unit comprising detecting whether a hot-plugging  
3       of said video display unit occurs.

1           64. (Previously Presented)   The method of claim 63, said hot-plugging of said video  
2       display unit comprising connecting said video display unit to said processing unit after a booting  
3       process of said processing unit is completed.

1           65. (Previously Presented)   The method of claim 8, said detecting being performed after  
2       a booting process of said processing unit is completed.

1           66. (Previously Presented)   The method of claim 8, said sensing of said interrupt signal  
2       being performed after a booting process of said processing unit is completed.

1           67. (Previously Presented)   The method of claim 9, said detecting whether said video  
2       display unit is newly coupled to said processing unit comprising detecting whether a hot-plugging  
3       of said video display unit occurs.

1           68. (Previously Presented)   The method of claim 67, said hot-plugging of said video  
2       display unit comprising connecting said video display unit to said processing unit after a booting  
3       process of said processing unit is completed.

1        69. (Previously Presented) The method of claim 9, said detecting being performed after  
2        a booting process of said processing unit is completed.

1        70. (Previously Presented) The method of claim 9, said sensing of said interrupt signal  
2        being performed after a booting process of said processing unit is completed.